

AMENDMENT TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A rangefinder for obtaining information about the three-dimensional location of an object by projecting light onto the object and receiving part of the light that has been reflected from the object, the rangefinder comprising:

a light source for projecting the light on the object;

a shutter positioned between the light source and the object which can open and close freely and blocks the light that has been projected from the light source when closed;

a camera for receiving the part of the projected light that has been reflected from the object;

a distance-measuring sensor for measuring the distance to the object; and

a controller for controlling optical output power of the light source and/or exposure conditions of the camera based on range information about the object,

wherein the controller uses the output of the distance-measuring sensor as an item of the range information about the object, and

wherein the controller selectively controls the open and closed states of the shutter to at least prevent damage to the object when the object is positioned close to the light source.

2. (Previously Presented) The rangefinder of Claim 1, wherein the distance-measuring sensor utilizes reflected ultrasonic waves from the object to measure distance.

3. (Original) The rangefinder of Claim 1, further comprising a range calculator for obtaining a range image based a video signal output from the camera,

wherein the controller uses the range image obtained by the range calculator as an item of the range information about the object.

4. (Original) The rangefinder of Claim 1, wherein if the controller has determined based on the range information that the distance to the object is equal to or greater than a first threshold value, the controller increases the optical output power of the light source, and

wherein if the controller has determined based on the range information that the distance is equal to or smaller than a second threshold value, the controller decreases the optical output power of the light source.

5. (Original) The rangefinder of Claim 1, wherein the exposure conditions of the camera are defined based on at least one of a diaphragm stop, a sensitivity of an imager and a shutter speed.

6. (Canceled)

7. (Currently Amended) A rangefinder for obtaining information about the three-dimensional location of an object by projecting light onto the object and receiving part of the light that has been reflected from the object, the rangefinder comprising:

a light source for projecting the light on the object;

a shutter positioned between the light source and the object which can open and close freely and blocks the light that has been projected from the light source when closed;

a camera for receiving the part of the projected light that has been reflected from the object; and

a controller for controlling optical output power of the light source and/or exposure conditions of the camera based on information about the level of a video signal output from the camera,

wherein the controller selectively controls the open and closed states of the shutter to at least prevent damage to the object when the object is positioned close to the light source.

8. (Original) The rangefinder of Claim 7, wherein if the controller has determined based on the level information that the distance to the object is equal to or greater than a first threshold value, the controller increases the optical output power of the light source, and

wherein if the controller has determined based on the level information that the distance is equal to or smaller than a second threshold value, the controller decreases the optical output power of the light source.

9. (Original) The rangefinder of Claim 7, wherein the exposure conditions of the camera are defined based on at least one of a diaphragm stop, a sensitivity of an imager and a shutter speed.

10. (Previously Presented) The rangefinder of Claim 7, further comprising a distance-measuring sensor for measuring a distance to the object,

wherein the controller uses the output of the distance-measuring sensor as an item of the range information about the object.

11. - 23. (Canceled)

24. (Currently Amended) A rangefinder for obtaining information about the three-dimensional location of an object by projecting light onto the object and receiving part of the light that has been reflected from the object, the rangefinder comprising:

a light source for projecting the light on the object;

a camera for receiving the part of the projected light that has been reflected from the object; and

a controller for controlling optical output power of the light source and exposure conditions of the camera,

wherein the controller sets the exposure conditions, in a first interval during which a range image is captured, such that an intensity of incoming light is relatively low and

the optical output power sufficiently high that the range image can be captured with the exposure conditions, and

wherein the controller sets, in a second interval during which a ~~the~~ color image is captured, the exposure conditions such that the intensity of incoming light is relatively high and the optical output power is off.